



Inputs, Process Indicators, & Intermediate Outcomes: Tools for Answering Evaluation Research Questions

Session 3

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Teacher Incentive Fund Evaluation Working Group Meeting
Sept. 23 & 24, 2009
Chicago, IL

Session Goals

- Consider useful alternatives to experimental or quasi-experimental designs
 - For mid-course corrections
 - To provide some evidence of program effects
- Review & help you develop measures of processes & intermediate outcomes

Typical Situation

- Evaluation starts after program implementation has begun
 - No pre-implementation data on some key variables, such as instructional practice
- No randomization of treatment
 - Educator choice or assignment based on perceived need
 - Hard to find equivalent control group
- Limited resources

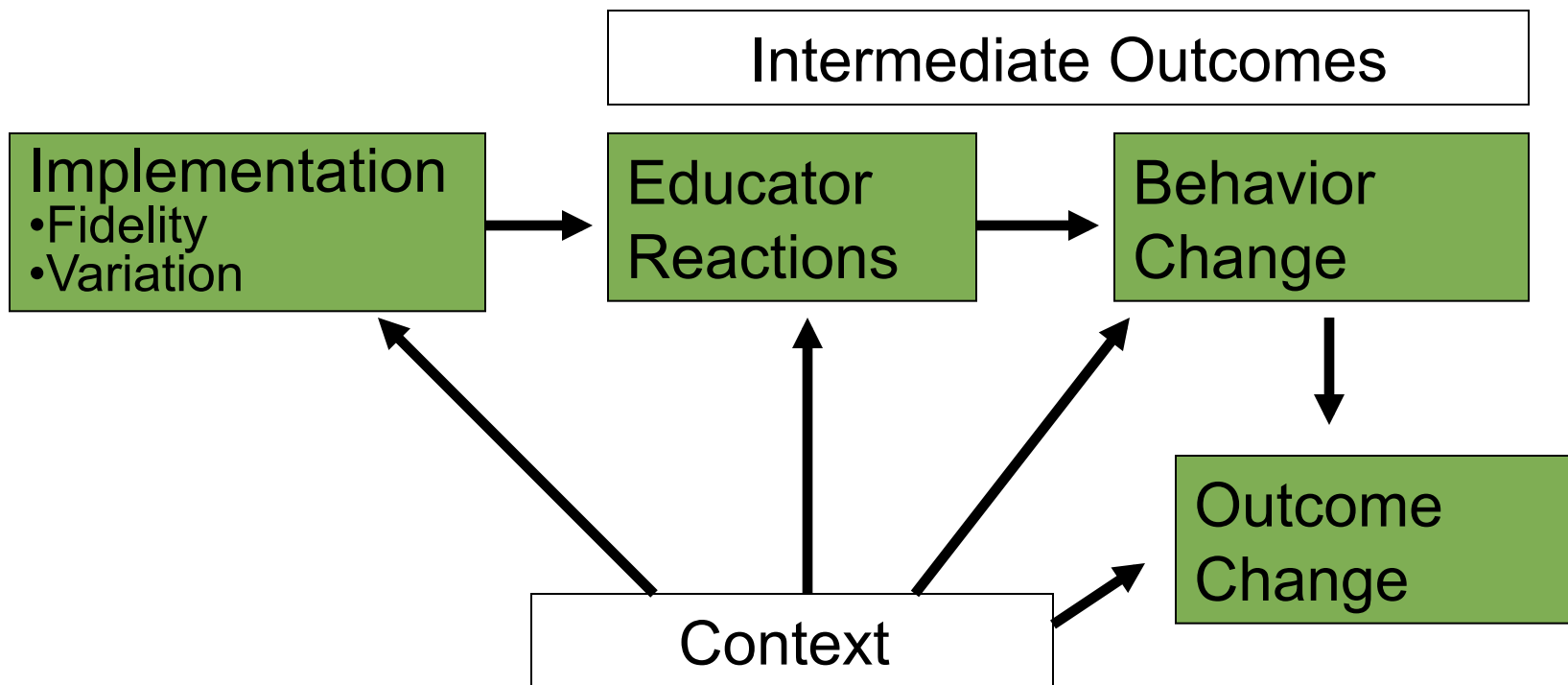
Basic Design Elements

- Mixed methods process tracing
 - How did the purported causal chain play out?
- Non-equivalent but policy-relevant comparison groups
- Implementation variation
 - If within-project variation was present, was that variation related to outcomes?

Logic for Pattern-Match Design

- Program was well implemented
- Expected intermediate outcomes occurred
- Outcome measures changed in intended direction
- Conclusion: theory of action appears to be operating & changes in outcomes likely due to program

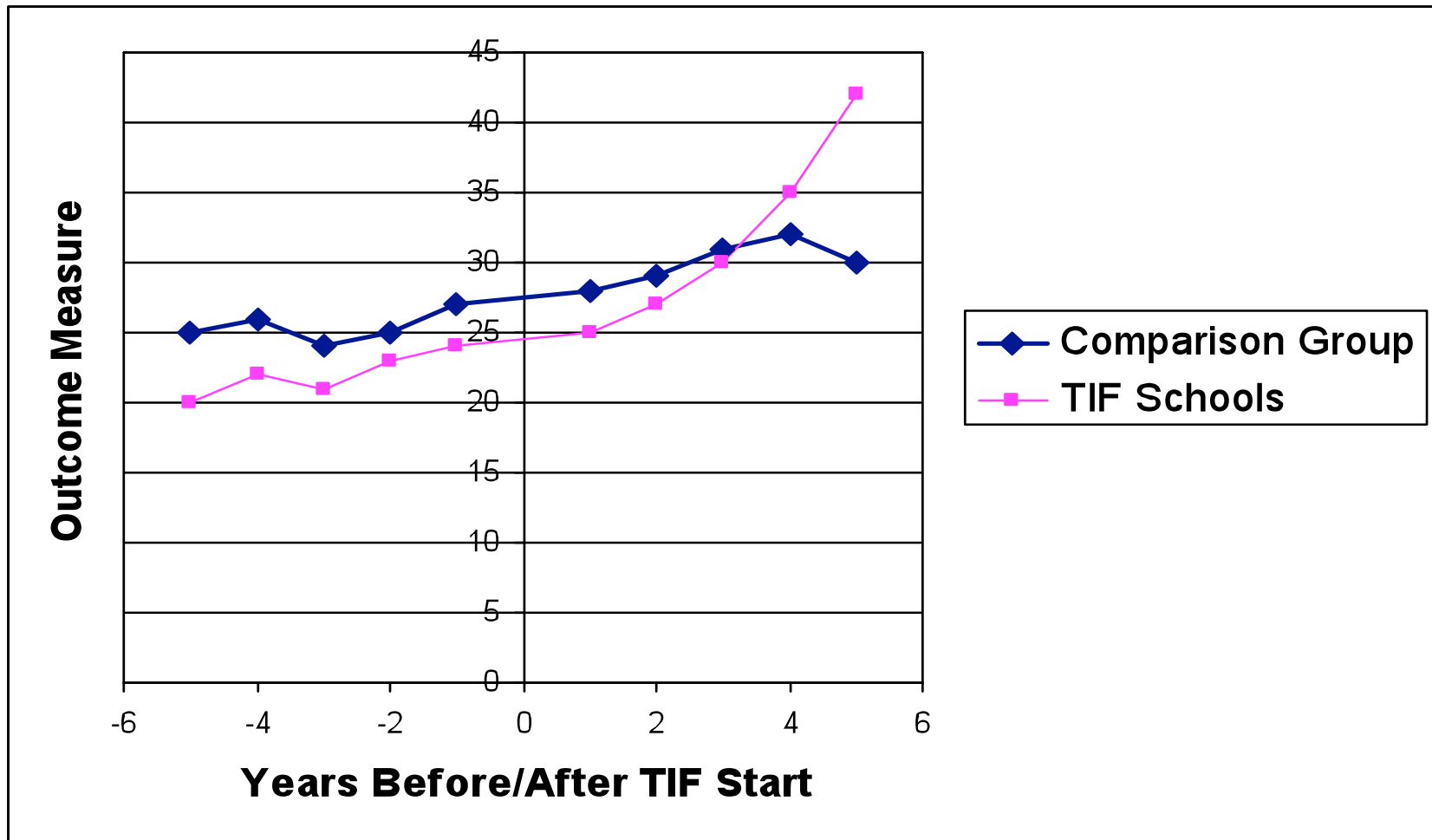
Basic Design



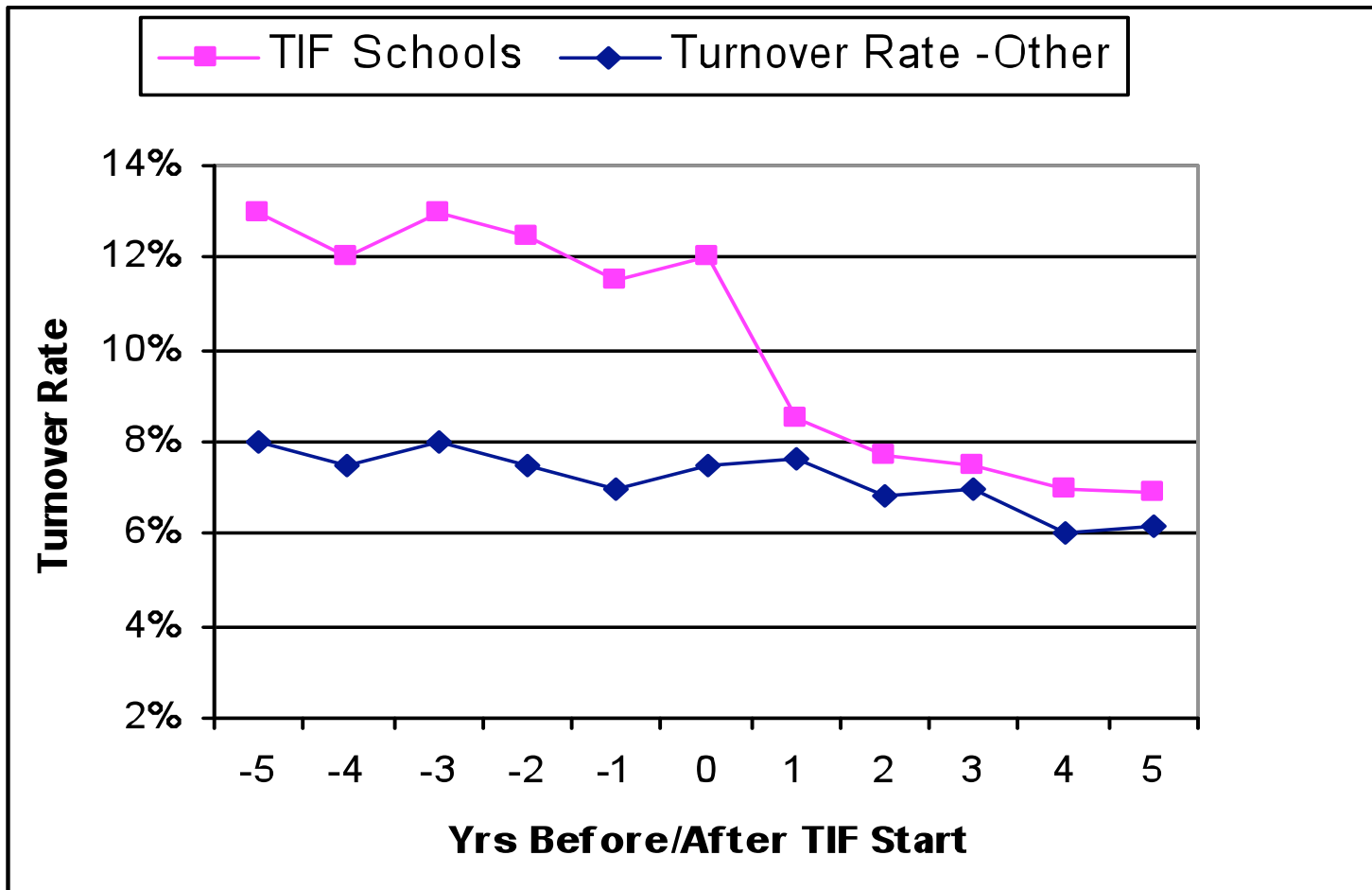
Potential Non-equivalent Comparison Groups

- Non-implementers
- District average
- Benchmark schools
- State average for demographically similar schools/districts

Comparing Trends I

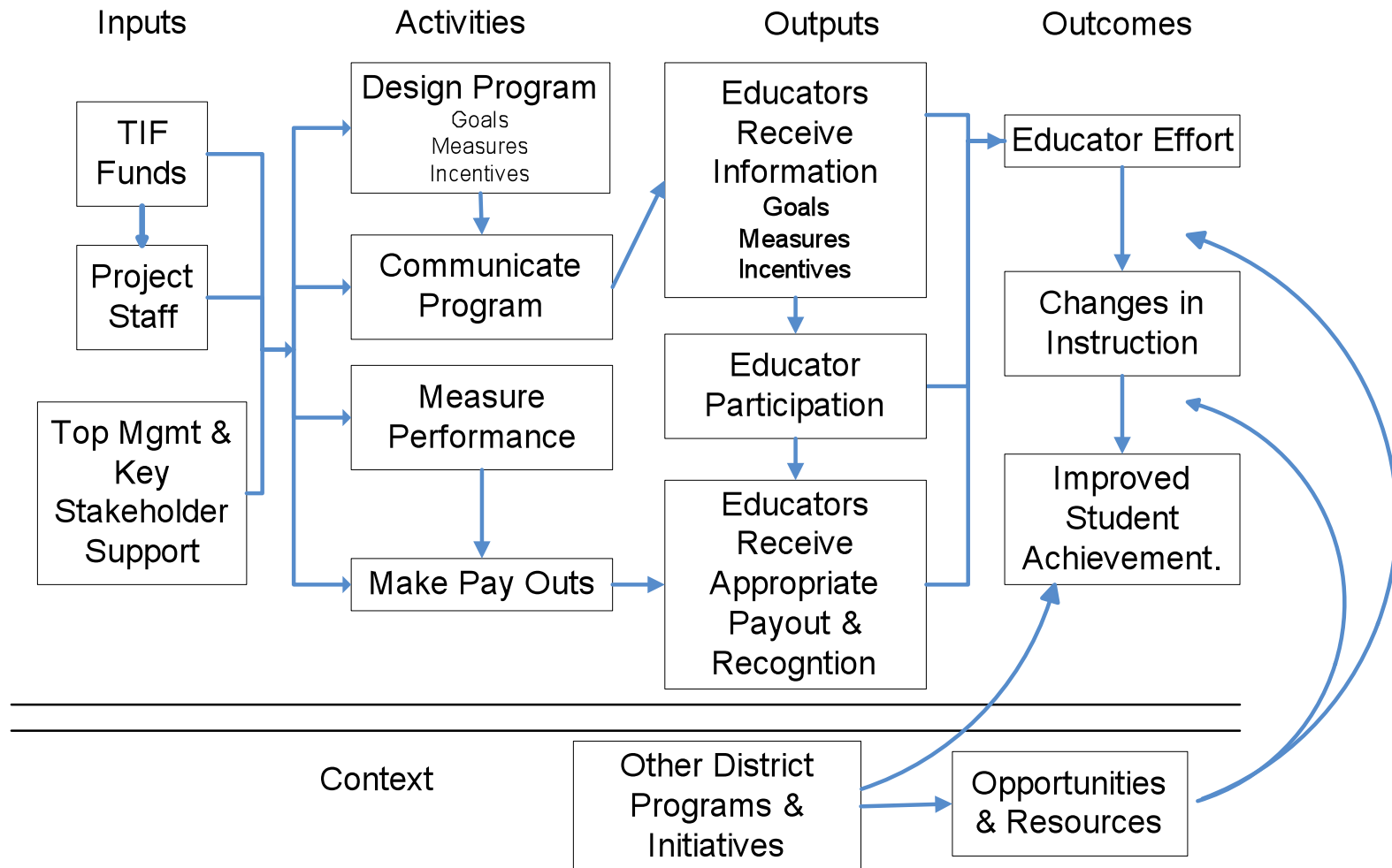


Comparing Trends II



Measuring Inputs, Processes, & Intermediate Outcomes

Logic Model



Measuring Implementation

- Key processes from logic model
- Supplement by reviewing common implementation problems:
 - Educators do not understand the program
 - Lack of stakeholder support
 - Conflicting/competing initiatives
 - Supporting systems not in place

Implementation Measures: Inputs

- Spending patterns & costs
 - Were funds spent as planned?
 - Was funding provided sufficient to support planned activities?
- Staffing: adequacy & continuity; champion
- Stakeholder attitudes
- Context features that would work with/against program
- Data system adequacy (data quality plan)

Implementation Measures – Activities & Outputs

- Quantitative
 - # of communication sessions/newsletters/web site hits
 - % of schools in which leaders communicated program to staff
 - % of target educators receiving communications
 - % of schools with program coordinators in place & trained
 - % of teachers with valid teacher-student link
 - Planned vs. actual \$ spent on incentives
 - Actual vs. planned payout distribution (differentiation)
 - % of payouts made on time
 - % of payout errors
- Data sources: grant application, budgets, self-assessments, annual reports, administrative data

Implementation Measures – Activities & Outcomes

- Qualitative Examples
 - Educators have access to clear & complete description of program via multiple channels
 - Performance measures actually used to make payouts were the same as in the design
 - Process in place & used to correct performance measurement or payout errors
 - Alignment of program with potentially competing/conflicting initiatives
- Data sources: interviews, document review (grant applications, self-assessments, annual reports, meeting agendas & minutes)

Implementation Rubrics, Indices & Scorecards

- Combine quantitative output measures & qualitative assessments to summarize quality of implementation & implementation fidelity on key dimensions
- Provide a way to translate judgments into numbers for use in statistical analyses (e.g., is variation across schools related to intermediate or long range outcomes?)
- Examples
 - TAP Implementation Standards
 - Berends, Bodilly, & Kirby, 2002, Chapter 4 (RAND study of New American Schools)

Measuring Intermediate Outcomes: Educator Reactions

- Priority Areas
 - Program understanding
 - Incentive amounts
 - Performance-reward contingency
 - Effort-performance link
 - Fairness

Educator Reactions Surveys

- Motivation Model Elements
- Motivational Responses
- See “Short Form Teacher Reaction Survey”
- Other examples:
- <http://www.performanceincentives.org/data/files/news/BooksNews/GEEG Year Three Report.pdf>
- <http://www.performanceincentives.org/data/files/directory/ConferencePapersNews/Jacob and Springer 2008.pdf>

Educator Reactions Interview

- Find out what schools & teachers are doing in response to the program
- Uncover unexpected consequences
- Facilitate survey development
- Some examples of what we have learned via interviews

Is motivation taking place?

Interview Questions

- How has the incentive program affected your teaching?
- How has the incentive program affected how your school is run?
- Has the incentive program changed how you focus your efforts?
- Have you done anything differently in order to improve your chances of receiving the incentive?
- Has the *incentive* motivated you to work harder or change the focus of your efforts?

Measuring Intermediate Outcomes: Behavior Change

- Surveys
- Focus groups
- Interviews
- Observations
- Unobtrusive Measures

Measuring Intermediate Outcomes: Behavior Change

Surveys of instructional practice are attractive, but hard to do right.

- Need at theory of instruction
- Content specificity
- Response Problems
 - Social desirability/demand effects
 - Memory
 - Can most educators recognize depth of practice change?
- Can you build a confirmatory survey based on interviews or focus groups?

Potential Interview Questions

- Principals/other school leaders
 - Have teachers been doing anything differently in the classroom since the program began?
- Teachers
 - Have your school administrators been doing anything differently since the program began?
- Central office administrators
 - Have the school administrators you work with been doing anything differently since the program began?

Unobtrusive Measures

- Change in PD demand (volume, content)
- Curriculum material purchases
- Scheduling changes/time allocations
- Staffing changes
- Staff meeting agendas
- School improvement plans

Your Turn

- Work on developing process & intermediate outcome measures that fit your program
- Share innovative ways you have used to measure inputs, processes, & intermediate outcomes